

*Glossotherium*, in forming part of the circumference of an ellipse, whose long axis is vertical; and in sending outwards, from its anterior part, a convex eminence, which terminates in a point directed downwards and forwards.

Such appear to be the most characteristic features of the cranial fragment under consideration, in which we have found, that the articular surface for the os hyoides throws more light upon the nature of the animal of which it is a part, than even the glenoid cavity itself. There now remains to be described as much of the individual characters of the constituent bones as the specimen exhibits.

The occipital bone, besides forming the posterior and part of the inferior parietes of the cranium, extends for about half an inch upon the sides, where the ex-occipital element is articulated by a vertical suture with the mastoid element of the temporal: this suture is situated in a deep and well-marked muscular depression (*e*, fig. 1), measuring three inches in the vertical, and upwards of one inch in the transverse direction. The other sutures, uniting the occipital to the adjoining bones, are obliterated. The breadth of the occipital region must have exceeded the height of the same by about one-third. The condyle extends nearly to the external boundary of the occipital aspect of the cranium; there is situated, external to it, only a small ovate, rounded and smooth protuberance. The slightly concave surface of the occipital plane of the cranium is bounded above by a thick obtuse ridge, the muscular impressions are well sculptured upon it. It is traversed transversely at its upper third by a slightly elevated bony crest; and the surface below this ridge is again divided by a narrower intermuscular crest, which runs nearly vertically, at about an inch and a half from the external boundary of the occipital plane. As a similar crest must have existed on the opposite side, the general character of the occipital surface in the *Glossotherium* would resemble that of the *Toxodon*. A similar correspondence may be noticed in the terminal position of the condyle, and the slope of the occipital plane.

Above the transverse ridge, the rough surface of the occipital plane slopes forward, at a less obtuse angle with the basal plane, to the first named ridge which separates the occipital from the coronal or superior surface of the skull. The contour of this surface runs forwards, as far as the fragment extends, in an almost straight line: the extent of surface between the temporal muscular ridges must have been about five inches posteriorly, but it decreases gradually as it extends forwards: all that part which is preserved is quite smooth. The attachment of the fasciculi of the temporal muscle, and the convergence of their fibres as they passed through the zygoma are well marked on the sculptured surface of the bone. The zygomatic process is relatively stouter than in *Orycteropus*: it is prismatic: the external facet is nearly plane: the superior is concave, and increases in breadth anteriorly: the inferior surface offers a slight convexity behind the flattened articular surface for the lower jaw. The margin

of the zygoma formed by the meeting of the upper and lower facets presents a semicircular curve, extended transversely from the cranium, and directed forwards.

The anterior extremity is obliquely truncated from below upwards and forwards, and presents a flattened triangular surface indicative of its junction with an os malæ: the space between this extremity and the side of the cranium measures one inch and nine lines across, and thus gives us the thickness of the temporal muscle. The distance from the origin of the zygoma to the occipital plane is relatively greater than in *Orycteropus*; *Glossotherium* is in this respect more similar to *Myrmecophaga* and *Manis*.

The sphenoid bone forms a somewhat smooth protuberance below and behind the base of the zygoma. The tympanic bone is wedged in between this protuberance in front, and the mastoid process behind. The chief peculiarity of the broad mastoid is the regular semicircular cavity at its under part for the articulation of the styloid bone of the tongue. This depression is separated below by a broad rough protuberance from the foramen jugulare, (*f*, fig. 2, Pl. XVI.) which is immediately external to, and slightly in advance of the great foramen condyloideum, *c*. A small rugged portion of the os petrosum separates the jugular from the carotid canal, which arches upwards and directly inwards to the side of the shallow sella turcica, (the external and internal orifices of the carotid canal are shown at *g*, figs. 2 and 3). The chief protuberance on the basis cranii is a large and rugged one, serving for the attachment of muscles, and due chiefly to the expansion of a great sinus in the body of the sphenoid. This protuberance is separated from the smaller sphenoid protuberance before mentioned by a large groove continued downwards and forwards from the tympanic cavity, and containing the Eustachian tube, which does not traverse a complete osseous canal. Immediately internal to the glenoid cavity is the large orifice of the canal transmitting the third division of the fifth pair of nerves, the principal branch of which endows the tongue with sensibility; this foramen (*h*, fig. 2) is rather less than that for the muscular nerve of the tongue.

The internal surface of the present cranial fragment affords a very satisfactory idea of the size and shape of the brain of the extinct species to which it belongs. It is evident that, as in other Bruta, the cerebellum must have been almost entirely exposed behind the cerebrum; and that the latter was of small relative size, not exceeding that of the Ass; and chiefly remarkable, as in the *Orycteropus*, Ant-eater, and Armadillo for the great development of the olfactory ganglia. The antero-posterior extent of the cribriform plate, as exposed in this fragment, is three inches, and the complication of the æthmoid olfactory lamellæ which radiate from it into the nasal cavity is equal to that which exists in the smaller Edentata (fig. 3, Pl. XVI). The nasal cavity is complicated in *Glosso-*